

**In the Claims**

1           1. (Previously Presented) A switch comprising:  
2           a plurality of field effect transistors connected in series, each field effect transistor  
3 including a gate, a source, and a drain, each gate having a gate width and a gate length;  
4           said gate length of one of said series connected field effect transistors being a different  
5 size from said gate length of another series connected field effect transistor.

1           2. (Previously Presented) The switch as claimed in claim 1, wherein said gate of one of  
2 said plurality of series connected field effect transistor has a longer gate length than said gate of  
3 said other series connected field effect transistor.

1           3. (Original) The switch as claimed in claim 1, wherein said gate of one of said plurality  
2 of series connected field effect transistor has a distance to its drain port that is less than a  
3 distance to its source port.

1           4. (Original) The switch as claimed in claim 1, wherein said gate of one of said plurality  
2 of series connected field effect transistor has a distance to its source port that is less than a  
3 distance to its drain port.

1           5. (Original) The switch as claimed in claim 3, wherein said gate of said other series  
2 connected field effect transistor has a distance to its source port that is equal to a distance to its  
3 drain port.

1           6. (Original) The switch as claimed in claim 4, wherein said gate of said other series  
2 connected field effect transistor has a distance to its source port that is equal to a distance to its  
3 drain port.

1           7. (Original) The switch as claimed in claim 1, wherein the different gate sizes increase a  
2 parasitic capacitance within the switch.

1           8. (Currently Amended) A switch comprising:

2           a plurality of dual-gate field effect transistors connected in series, each dual-gate field  
3 effect transistor including two gates, a source, and a drain;

4           one of said series connected dual-gate field effect transistors having a modified gate  
5 therein, said modified gate having a length that is of a different size from gates gate lengths of  
6 other series connected dual-gate field effect transistors.

1           **Claim 9 (Cancelled)**

1           10. (Original) The switch as claimed in claim 8, wherein said modified gate of said series  
2 connected dual-gate field effect transistor has a distance to its drain port that is less than a  
3 distance to its source port.

1           11. (Original) The switch as claimed in claim 8, wherein said modified gate of said series  
2 connected dual-gate field effect transistor has a distance to its source port that is less than a  
3 distance to its drain port.

1           12. (Original) The switch as claimed in claim 10, wherein gates of said other series  
2 connected dual-gate field effect transistors have a distance to its source port that is equal to a  
3 distance to its drain port.

1           13. (Original) The switch as claimed in claim 11, wherein gates of said other series  
2 connected dual-gate field effect transistors have a distance to its source port that is equal to a  
3 distance to its drain port.

1           14. (Original) The switch as claimed in claim 8, wherein a second series connected dual-  
2 gate field effect transistor has a modified gate therein that is of a different size from gates of  
3 other series connected dual-gate field effect transistors.

1           15. (Original) The switch as claimed in claim 8, wherein said dual-gate field effect  
2 transistors are high-electron-mobility-transistors.

1           16. (Original) The switch as claimed in claim 8, wherein the different gate sizes increase  
2 a parasitic capacitance within the switch.

1           17. (Currently Amended) A The switch as claimed in claim 8, wherein comprising:  
2 a plurality of dual-gate field effect transistors connected in series, each dual-gate field  
3 effect transistor including two gates, a source, and a drain;  
4 one of said series connected dual-gate field effect transistors having a modified gate  
5 therein that is of a different size from gates of other series connected dual-gate field effect  
6 transistors;

7           said dual-gate field effect transistors include a transistor connection segment between  
8 said gates and a heavily doped cap layer fabricated upon said transistor connection segment  
9 between said gates.

1           **Claim 18 (Cancelled)**

1           19. (Previously Presented) A high-electron-mobility-transistor, comprising:  
2 two gate fingers;  
3 a transistor connection segment between said gate fingers; and  
4 a heavily doped cap layer fabricated upon said transistor connection segment between  
5 said gate fingers;  
6 said gate fingers being of different sizes.

1           20. (Original) The high-electron-mobility-transistor as claimed in claim 19, wherein one  
2 of said gate fingers has a distance to its source port that is less than a distance to its drain port.

1           21. (Original) The high-electron-mobility-transistor as claimed in claim 19, wherein one  
2 of said gate fingers has a distance to its drain port that is less than a distance to its source port.

1 22. (Currently Amended) A radio frequency single pole double throw switch, comprising:

2 a receiver port;

3 a transmitter port;

4 an antenna port;

5 a receiver section connecting said receiver port to said antenna; and

6 a transmitter section connecting said transmitter port to said antenna;

7 said receiver section including a plurality of dual-gate field effect transistors connected in  
8 series, each dual-gate field effect transistor including two gates, a source, and a drain such that

9 one of said series connected dual-gate field effect transistors has a modified gate therein, said

10 modified gate having a length that is of a different size from gates gate lengths of other series

11 connected dual-gate field effect transistors.

1 23. (Original) The radio frequency single pole double throw switch as claimed in claim

2 22, wherein a source of said modified gate transistor is connected to said receiver port.

1 24. (Original) The radio frequency single pole double throw switch as claimed in claim

2 22, wherein a drain of said modified gate transistor is connected to said antenna port.

1 25. (Original) The radio frequency single pole double throw switch as claimed in claim

2 22, wherein a second series connected dual-gate field effect transistor has a second modified gate

3 therein that is of a different size from gates of other series connected dual-gate field effect

4 transistors.

1 26. (Original) The radio frequency single pole double throw switch as claimed in claim

2 25, wherein a source of said modified gate transistor is connected to said receiver port and a

3 drain of said second modified gate transistor is connected to said antenna port.

1 27. (Original) The radio frequency single pole double throw switch as claimed in claim

2 22, wherein said dual-gate field effect transistors are high-electron-mobility-transistors.

1           28. (Original) The radio frequency single pole double throw switch as claimed in claim  
2 22, wherein said modified gate of said series connected dual-gate field effect transistor has a  
3 longer gate length and/or gate width than gates of said other series connected dual-gate field  
4 effect transistor.

1           29. (Original) The radio frequency single pole double throw switch as claimed in claim  
2 22, wherein said modified gate of said series connected dual-gate field effect transistor has a  
3 distance to its drain port that is less than a distance to its source port.

1           30. (Original) The radio frequency single pole double throw switch as claimed in claim  
2 22, wherein said modified gate of said series connected dual-gate field effect transistor has a  
3 distance to its source port that is less than a distance to its drain port.

1           31. (Original) The radio frequency single pole double throw switch as claimed in claim  
2 29, wherein gates of said other series connected dual-gate field effect transistors have a distance  
3 to its source port that is equal to a distance to its drain port.

1           32. (Original) The radio frequency single pole double throw switch as claimed in claim  
2 30, wherein gates of said other series connected dual-gate field effect transistors have a distance  
3 to its source port that is equal to a distance to its drain port.

1           33. (Original) The radio frequency single pole double throw switch as claimed in claim  
2 22, wherein the different gate sizes increase a parasitic capacitance within the switch.

1           34. (Currently Amended) A ~~The~~ radio frequency single pole double throw switch as  
2 ~~claimed in claim 22, wherein~~ comprising:  
3           a receiver port;  
4           a transmitter port;  
5           an antenna port;

6        a receiver section connecting said receiver port to said antenna; and  
7        a transmitter section connecting said transmitter port to said antenna;  
8        said receiver section including a plurality of dual-gate field effect transistors connected in  
9        series, each dual-gate field effect transistor including two gates, a source, and a drain such that  
10       one of said series connected dual-gate field effect transistors has a modified gate therein that is of  
11       a different size from gates of other series connected dual-gate field effect transistors;  
12       said dual-gate field effect transistors include a transistor connection segment between  
13       said gates and a heavily doped cap layer fabricated upon said transistor connection segment  
14       between said gates.

1       **Claims 35-37 (Cancelled)**

1       38. (Currently Amended) The radio frequency single pole double throw switch as  
2       claimed in claim 3935, wherein said transmitter section includes a first transmitter dual-gate high  
3       electron mobility transistor having gates of different lengths and a second transmitter dual-gate  
4       high electron mobility transistor having gates of different lengths.

1       39. (Currently Amended) ~~A~~ The radio frequency single pole double throw switch as  
2       ~~claimed in claim 38, wherein~~ comprising:

3       a receiver port;  
4       a transmitter port;  
5       an antenna port;  
6       a receiver section connecting said receiver port to said antenna; and  
7       a transmitter section connecting said transmitter port to said antenna;  
8       said receiver section including,  
9             a first receiver dual-gate high electron mobility transistor having  
10       gates of different lengths, and  
11             a second receiver dual-gate high electron mobility transistor having  
12       gates of different lengths;

13        said transmitter section including a first transmitter dual-gate high electron mobility  
14 transistor having gates of different lengths and a second transmitter dual-gate high electron  
15 mobility transistor having gates of different lengths;  
16        ~~the source of~~ said first transmitter dual-gate high electron mobility transistor having a  
17 source, said source being is connected to said receiver port and the drain of said second  
18 transmitter dual-gate high electron mobility transistor is connected to said antenna port.

1        40. (Currently Amended) The radio frequency single pole double throw switch as  
2 claimed in claim 3935, wherein a first gate of said first receiver dual-gate high electron mobility  
3 transistor has a longer gate length and/or gate width than a second gate of said first receiver dual-  
4 gate high electron mobility transistor.

1        41. (Currently Amended) The radio frequency single pole double throw switch as  
2 claimed in claim 3935, wherein a first gate of said first receiver dual-gate high electron mobility  
3 transistor has a distance to its drain port that is less than a distance to its source port.

1        42. (Currently Amended) The radio frequency single pole double throw switch as  
2 claimed in claim 3935, wherein a first gate of said second receiver dual-gate high electron  
3 mobility transistor has a distance to its source port that is less than a distance to its drain port.

1        **Cancelled Claims 43-44**

1        45. (Currently Amended) The radio frequency single pole double throw switch as  
2 claimed in claim 3935, wherein the different gate lengths increase a parasitic capacitance within  
3 the switch.

1        46. (Currently Amended) The radio frequency single pole double throw switch claimed in  
2 claim 3935, wherein the different gate lengths improve the linearity without impacting the ESD  
3 and EOS ruggedness.

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**1 Claims 47-50 (Cancelled)**